City of Encinitas

Draft Ordinance 2020-04

Virtual Public Meeting Questions and Answers

June 15, 2020 4:00 PM

1. *Will the reach code include banning new natural gas hookups? Heat pumps are one of the best ways of reducing GHG.*

   The proposed reach codes in Ordinance 2020-04 do not include a natural gas infrastructure ban.

2. *If it is cost effective it should save businesses money, why would you delay it?*

   The Ordinance must be adopted by a majority of the City Council. All information, including cost-effectiveness, will be provided to the City Council for review, public hearing, and a decision on adoption.

3. *Is there a specific exemption for greenhouses and agricultural accessory buildings from the definition of commercial buildings? If not, there needs to be.*

   The proposed exemption for greenhouse buildings was added after receiving feedback for existing greenhouse uses in the City of Encinitas. The Infeasibility Exception may also apply to other agricultural buildings where the proposed Ordinance 2020-04 applies.

4. *Will any extra building costs due to the reach code be exempt from property tax? Solar is I believe but what about energy efficiency measures such as insulation and lighting?*

   Ordinance 2020-04 does not address property tax exemptions. Proposition 7 created the current Active Solar Energy Systems New Construction Exclusion. This is an exclusion and not an exemption which results in the installation of a qualifying solar energy system neither increasing nor decreasing the assessment of the existing property. The exclusion applies to the first owner of the system or a first buyer, if the building is a new build. When the ownership interests in the system are sold, the exclusion no longer applies except where certain exclusions apply for reassessment. The exclusion sunsets on January 1, 2025.[1]

   Generally, "new construction" – as defined by California Revenue and Taxation Code § 70 – includes: 1) any addition to land or improvements, including fixtures; and 2) any alteration of land or improvements that constitutes a major rehabilitation or converts the property to a different use. New construction is generally assessable, subject to certain exclusions, and may

[1] See California State Board of Equalization, Active Solar Energy System Exclusion: https://www.boe.ca.gov/proptaxes/active-solar-energy-system.htm#Description ; See also California Revenue and Taxation Code § 73: http://www.leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=73&lawCode=RTC

increase the taxable value of a property depending on the work being performed.[2] Property owners should seek specific information from the County Assessor's Office and/or tax experts to determine the effect of energy efficiency improvements on their property tax assessment.

5. *What would you do if there isn't enough roof /ground area to accommodate the required panels?*

   This situation is accounted for by the Solar PV requirement Exception 1 to Section 120.10 for infeasibility. Where a project applicant determines that there is insufficient space to accommodate the required solar PV panels, the applicant would submit evidence and document(s) sufficient for a building official determination that the requirement should be waived or reduced because of sufficient practical challenges that make the requirement infeasible. The project application should contact the building official for guidance on needed evidence and document(s).

6. *Who is the agency to approve net metering?*

   San Diego Gas & Electric (SDG&E) approves interconnection of net energy metering (NEM) solar PV systems under Rule 21. Project owners or their agents submit an interconnection application to SDG&E electronically through its DIIS system. Applicants can find additional information on the NEM process on SDG&E's website.[3]

7. *What about procuring 100% from the local energy provider? CCA or SDG&E?*

   The proposed language of EMC 23.12.110 D. allows Green Power to be used to meet the requirement found in Section A5.211 Renewable Energy. This allows a project application to use a minimum of 75% electric power from renewable energy sources offered by either SDG&E under its EcoChoice[4] or EcoShare[5] programs or the forthcoming offerings of the City of Encinitas community choice aggregator, San Diego Community Power (SDCP).[6] A project applicant may choose to procure 100% renewable energy to meet this requirement under these electricity supply options. However, the PV requirement proposed in EMC 23.12.80 C. requires onsite solar PV systems installation to serve onsite load. This proposed requirement does not allow the use of a utility clean energy program to meet its requirements.

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[2] See California Board of Equalization, New Construction: https://www.boe.ca.gov/proptaxes/newconstructionproperty.htm

[3] SDG&E NEM Website: https://www.sdge.com/residential/savings-center/solar-power-renewable-energy/net-energy-metering/nem-documents

[4] SDG&E EcoChoice Information: https://www.sdge.com/residential/savings-center/solar-power-renewable-energy/ecochoice; Note: EcoChoice is currently fully subscribed for small commercial customers. SDG&E expects to have an additional 2.3 megawatts (MWs) of capacity available by the end of 2020 or mid 2021 under its EcoShare program.

[5] SDG&E EcoShare Information: https://www.sdge.com/residential/savings-center/solar-power-renewable-energy/ecoshare

[6] SDCP Website: https://www.sdcommunitypower.org/

8. *And, how is this proposal helping and not exacerbating the duck curve? (too much energy on the grid during the insolated part of the day).*

   The purpose of proposed Ordinance 2020-04 is to cost-effectively reduce greenhouse gas (GHG) emissions in the City of Encinitas per the CAP. Proposed Ordinance 2020-04 requires a building to decrease its overall energy consumption through energy efficiency measures and/or onsite solar PV serving onsite load to cost-effectively reduce local GHG emissions. The duck curve is a utility scale challenge that has many possible long-term solutions, including energy storage, demand pricing, increased building energy efficiency, and energy supply technology improvements.

9. *How is it calculated for Mixed Use, if the project only has 1/3 commercial and very few residences?*

   EMC 23.12.110 D. of proposed Ordinance 2020-04 requires energy efficiency measures for the nonresidential portions of mixed-use buildings where the building is either a new construction, an alteration to an existing building with a permit application of at least $200,000, or an addition of at least 1,000 sq. ft. to an existing buildings. The requirements apply to the nonresidential portions of the mixed-use building.

10. *The cost effectiveness assumes the federal credit which is being phased out. Will this reduction be reflected in a new analysis of the cost effectiveness of a project?*

    Two cost-effectiveness studies were referenced to support proposed Ordinance 2020-04 – one for the solar photovoltaic requirement and a second for the energy efficiency requirement. Only the solar photovoltaic cost-effectiveness study includes the benefit of the federal investment tax credit (ITC). The ITC is scheduled to phase down from 26% in 2020 to 22% in 2021 and 10% thereafter. The solar PV study assessed the cost-effectiveness using a 19% tax credit, an average of the three years; however, the reported cost and benefit streams indicate that if the tax credit were removed, the benefits of the project will still exceed the costs resulting in no change to the cost-effectiveness determination.

11. *What kind of an annual cost increase in power were you using to do the cost effectiveness study?*

    The referenced cost-effectiveness studies use a 2% energy cost escalation rate consistent with California Energy Commission (CEC) life-cycle cost methodology and other studies commissioned by the CEC.

12. *If the inverters last 11 years why are they replaced twice in 15 years in the study?*

    While the solar PV cost-effectiveness study only examined the costs and benefits over a 15-year period, it is typical for a system to have a useful life greater than 25 years. The cost-effectiveness study provided additional lifetime costs for reference, but only includes those costs which would be incurred during the first 15 years in the cost-effectiveness analysis.

13. *Relative to the thresholds identified in Section 120.10, what is the basis on which the 2k increase in total roof area or $1 million permit valuation and 75% gross floor area were established?*

    These thresholds were identified based on a number of factors that included GHG reduction estimates, number of buildings affected, number of estimated permit applications affected, cost-effectiveness, and whether other similarly situated cities where using the same or similar thresholds.

14. *Relative to buildings with GFA < 10k square feet re: Applicant encouraged to right size PV system. Is the intent to encourage right sizing systems to meet building demand, or exceed it? Similarly, is the 15kWdc requirement per 10K for buildings with GFA > 10K square designed to meet building demand or exceed it?*

    The intent is to encourage right sizing to serve existing building demand. This both ensures greater cost-effectiveness and meets the NEM requirements for interconnection to the grid where a system cannot exceed the demand it serves onsite.

15. *Relative to Exceptions to Section 120.10: Concerned that there is no real concrete language or proposed regulation as to what constitutes a cause or finding for exemption; there are only examples. What specific criteria/conditions will the Building Official use to make determinations for waivers/reductions?*

    The language is intended to be open as the City and its building official gain experience implementing the ordinance. An applicant should contact the building official to determine what is sufficient to allow a determination for an exception or exemption under Section 120.10.

16. *Relative to Cost Effectiveness Study: Was there any study done with respect to commercial properties held by tax-exempt ownership/capital structures that don't benefit from ITCs?*

    Two cost-effectiveness studies were referenced to support proposed Ordinance 2020-04 – one for the solar photovoltaic requirement and a second for the energy efficiency requirement. Only the solar photovoltaic cost-effectiveness study includes the benefit of the federal investment tax credit (ITC). The ITC is scheduled to phase down from 26% in 2020 to 22% in 2021 and 10% thereafter. The solar PV study assessed the cost-effectiveness using a 19% tax credit, an average of the three years; however, the reported cost and benefit streams indicate that if the tax credit were removed, the benefits of the project will still exceed the costs resulting in no change to the cost-effectiveness determination.

    There are a range of programs available to tax exempt owners. See the response to question 17 below.

17. *Are there programs available to tax exempt owners that can't utilize any tax benefits?*

    Programs available for tax exempt owners include:

- Financing through a conventional loan or a Property Assessed Clean Energy (PACE) Program;

- Operating Leases: On-balance sheet financing that counts as debt. Property owners can take the ITC tax and depreciation benefits, if applicable, and repay the capital cost over the term of the lease. Operating leases can include an option to purchase the system at end of the term;

- Capital Leases: Off-balance sheet financing where a third-party retains ownership and tax benefits and capital costs are repaid as a monthly expense that may be tax deductible. Leases may be renewed or system purchased at end of term; and

- Power Purchase Agreements (PPAs): A third-party owns and maintains the system with the property owner agreeing to buy solar production at a set price per kilowatt hour (kwh) over a set term (e.g. 25 years).

Applicants should consult a tax and/or finance expert to determine appropriate choices for their specific circumstance.

18. *Relative to Virtual Net Metering: EPIC's Fact Sheet on Solar PV and Energy Efficiency Resources indicates SPV power generated for multi-tenant commercial properties is allocated to individual accounts of owner and tenants based on pre-arranged allocation. Do these allocations need to be re-negotiated every time a tenant and or use changes?*

    SDG&E's Generation Credit Allocation for Virtual Net Metering (VNM) uses the meter number and service address for a benefiting tenant account.[7] Because the allocation is meter specific, it will remain with that meter account until the property owner changes the allocation. SDG&E does not charge for the first change to a benefiting account allocation in a 12 months period but does charge $7.50 per benefiting account modification for any additional change during the 12 month period. The property owner is therefore able to renegotiate and reallocate benefits as needed.

19. *Regarding the emissions you provided in your chart, what percentage is attributed to commercial buildings vs residential?*

    The most recent city-wide inventory was conducted for 2016 as part of the City's Climate Action Plan.[8] While this inventory does not break down *emissions* for electricity and natural gas consumption by customer class, it does identify the *amount* of energy consumed by each. Nonresidential customers (commercial and industrial) accounted for 48% of electricity

[7] See SDG&E Generation Credit Allocation Request Form: http://regarchive.sdge.com/tm2/pdf/ELEC_ELEC-SF_142-02770.pdf

[8] See Appendix A (Greenhouse Gas Emissions Inventory and Projections) of the City of Encinitas Climate Action Plan: https://encinitasca.gov/Portals/0/City%20Documents/Documents/City%20Manager/Climate%20Action/Encinitas%20CAP%20Appendices_09.28.17_Final.pdf

consumption and 29% of natural gas consumption. Residential customers accounted for the remaining electricity (52%) and natural gas (71%) consumption.

20. *Can the solar be installed over a parking lot? The roof of my building is arched and that potentially be a challenge since the direction of the building is north/south. I was under the impression previously that solar panels over a parking lot in Encinitas was not really encouraged.*

    Proposed Ordinance 2020-04 does not make a distinction between rooftop or parking lot solar PV installations. Parking lot solar PV installations are becoming more common in the City of Encinitas and in the San Diego region broadly because they do not require rooftop modification and provide shade, cooling the area underneath the panels. The City of Encinitas is currently evaluating the installation of solar PV projects on its own parking lots.

21. *What if you change the discount rate from 3% to 6% when you calculate NPV?*

    Both cost-effectiveness studies referenced in support of proposed Ordinance 2020-04 use a 3% discount rate consistent with California Energy Commission life-cycle cost (LCC) methodology and time dependent valuation (TDV) methodology. Increasing the discount rate will decrease the impact of future cash flows, which consist primarily of benefits in the form of reduced energy utility bills. This change would reduce the degree to which projects are considered cost-effective as measured by the benefit-cost ratio; however, neither analysis assessed cost-effectiveness using multiple discount rates and thus the degree to which results would change is not known. Conversely, both analyses examine the costs and benefits expected over a 15-year period while the expected useful life from some projects will exceed this timeframe. Since cost savings could occur beyond the period considered, it is likely that the actual BCR for these example projects would be higher given the current discount rate.

22. *They will considering the affordable housing???*

    Affordable housing projects would be required to comply under proposed Ordinance 2020-04 where the project meets the applicability of the requirements.

23. *When will stakeholders with commercial assets who have implementation issues with the PV requirements as written be able to discuss them with the proper city representative.*

    Stakeholders who wish to discuss the requirements of this proposed ordinance are encouraged to reach out to Crystal Najera at cnajera@encinitasca.gov or 760-943-2285. When applying for a development permit, the project proponent may contact Development Services at 760-633-2710 to have project specific questions addressed.

24. *The infeasibility issues seems to give the building official a very subjective approach to making that determination. That will increase costs because the commercial property owner will have to pay consultants to argue his case. Can you make this less subjective or make it clearer how the building official makes this decision.*

The language is intended to be open as the City and its building official gain experience implementing the ordinance. An applicant should contact the building official to determine what is sufficient to allow a determination for an exception or exemption under Section 120.10.

25. *Because of duck curve, have you considered encouraging people to bias new solar installations westward?*

    The proposed ordinance does not require an orientation to the west for solar installations. However, it is expected that a solar installer will consider many variables to determine optimal performance of the PV system, including orientation of the panels, specific characteristics of the property, applicable rate schedules, and energy consumption patterns of the building.

26. *A commercial building on Sat and Sunday has no load so the exports do exacerbate the duck curve, right?*

    Nonresidential building energy consumption may depend on the specific use of the building. For example, nonresidential buildings used for restaurants or retail generally have a more consistent energy use each day of the week and in certain circumstances will have higher energy consumption on weekends. As explained above in response to question 8, it is undetermined how, if at all, this proposed ordinance would affect the duck curve.

27. *What about solar easements? Someone spends $$$ on a system only to get it shadowed by new construction to the south, for example.*

    Solar easements are property rights that must be negotiated with an adjacent property owner. Solar easements are generally considered a negative easement because they prevent an adjacent property owner from using his or her property in a manner that would prevent sunlight from reaching a solar energy system located on an adjacent property owned by the holder of the easement.

    Section 801.5 defines a “solar easement" as the “right of receiving sunlight across real property of another for any solar energy system.”[9] A solar easement must therefore be created for the sole purpose of accessing sunlight to create thermal or electric energy using a solar energy system, as defined by Section 801.5. A person merely seeking to access sunlight could not seek protections under Sections 801[10] and 801.5. Section 801.5(b) specifies that “any instrument creating a solar easement” must, at a minimum, include all of the following:

    - Description of the dimensions of the easement expressed in measurable terms;
    - Restrictions that would impair or obstruct the passage of sunlight through the easement; and

[9] See California Civil Code § 801.5: http://www.leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=801.5.&lawCode=CIV
[10] See California Civil Code § 801: http://www.leginfo.legislature.ca.gov/faces/codes_displaySection.xhtml?sectionNum=801.5.&lawCode=CIV

- The terms or conditions, if any, under which the easement may be revised or terminated.

It is suggested that any solar easement be in writing and recorded. Additionally, California's Solar Shade Control Act only protects solar energy system from shading caused by trees and shrubs on adjacent properties where the solar energy system installation predates the tree or shrub.[11]

28. *Will these codes be applicable to public school buildings?*

    Yes. Public School Buildings are defined as nonresidential buildings under Title 24.

29. *Have you analyzed cost benefit for retail owners who do not pay taxes and thus can not take the tax credits mentioned? This is common for properties owned by tax exempt pension funds or REITs*

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    There are a range of programs available to tax exempt owners. See the response to question 17 above.

30. *The cost study didn't include multifamily, yet it was included in the ordinance? Is there a separate cost study for multifamily?*

    Proposed Ordinance 2020-04 applies to nonresidential buildings, which includes high-rise multifamily (four stories or more) buildings. Low-rise multifamily buildings are not covered under this ordinance. The California Energy Commission does not require an exhaustive analysis of all nonresidential building prototypes and both analyses use a representative group of building types consistent with other studies that have gone before the CEC. The statewide study completed for the California Energy Codes and Standards Program identified similarities between a small hotel and a high-rise multifamily building, and that results for the small hotel may be applicable for a high-rise multifamily building. The study determined solar PV and energy efficiency requirements for a small hotel to be cost-effective.

[11] See California Public Resources Code §§ 28980-25986: http://www.leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=15.&title=&part=&chapter=12.&article=

31. *What tax credit factor was used as it changes?*

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